

REMARKS

Claims 1-11 are pending.

Claims 1-11 are rejected.

Claim 1 is amended.

No new matter is added.

Claims 1-11 remain in the case.

Applicant requests reconsideration and allowance of the claims in light of the following remarks.

Claim Rejections – 35 U.S.C. § 103

Claims 1-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent no. 6,051,349, Yoshioka et al., (“Yoshioka et al.”).

Applicant respectfully traverses the Examiner’s rejection.

Claim 1 is amended to recite, “transmitting temperature data *of soft baking temperature, post baking temperature and hard baking temperature* from the resist coating and developing apparatus to the exposure control apparatus, *when baking processes are each performed*;

determining a resist film exposure time responsive to the temperature data; and exposing the resist film to a light source for the determined resist film exposure time, *wherein the resist film temperature data as initially calculated are replaced with practically measured temperature data when the baking processes are performed to adjust the exposure time.*

Thus, according to a feature of the present invention, the temperature data of the soft baking temperature, post baking temperature and hard baking temperature are transmitted from the resist coating and developing apparatus to the exposure control apparatus (feedback) when the soft baking process, post baking process and hard baking process are performed after or before the development process to thereby control the exposure time.

With respect to claim 1, the Examiner has admitted that Yoshioka does not expressly disclose, “determining a resist film exposure time responsive to the resist film temperature data.” Indeed, nothing in Yoshioka teaches or suggests that the light exposure time is determined responsive to the temperature data.

Yoshioka merely teaches controlling of exposure time in response to a line width. Mere descriptions concerning the relationships between the bake temperatures and the line widths of patterns do not teach or suggest, “determining a resist film exposure time responsive to the resist film temperature data,” as recited in claim 1. More particularly, in Yoshioka, at col. 12, lines 41-54, it is merely stated that “the information on the measurement of the line width is fed back so as to control at least one of the resist coating conditions such as...light exposure time...the baking temperature.” Nothing here teaches or suggests the relationship between the light exposure time and the temperature data, i.e., “light exposure time [being] controlled responsive to the temperature data,” as recited in the claimed invention. Rather, in Yoshioka, both the light exposure time and the baking temperature are merely one of many equal conditions to be decided responsive to the line width. Therefore, Yoshioka does not teach or suggest, “determining a resist film exposure time responsive to the resist film temperature data,” as recited in claim 1.

Also, Yoshioka does not teach or suggest, “exposing the resist film to a light source for the determined resist film exposure time, wherein *the resist film temperature data as initially calculated are replaced with practically measured temperature data when the baking processes are performed to adjust the exposure time*,” as recited in amended claim 1.

Rather, Yoshioka merely discloses controlling the light exposure time based on the line width of the resist pattern measured immediately after the development as shown in FIG.S 14 and 15. Although Yoshioka controls the exposure time, this is done only when the detected value of the resist film thickness does not fall within an allowable range, not in response to practically measured baking temperature data. See col. 12, lines 44-54 of Yoshioka.

Thus, claim 1 is believed to be allowable.

Claims 2-4 depend from claim 1, and for at least the reasons given for claim 1, these claims are believed to be allowable.

For the same or similar reasons discussed above, claims 5 and 9 are believed to be allowable and claims 6-8 and claims 10-11, which respectively depend therefrom, are also allowable.

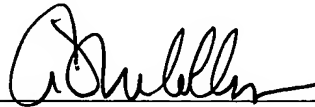
For the reasons discussed above, the rejection does not present a *prima face* case of obviousness and all of the claims are allowable.

In conclusion

For the foregoing reasons, reconsideration and allowance of claims 1-11 of the application as amended is solicited. The Examiner is encouraged to telephone the undersigned at (503) 222-3613 if it appears that an interview would be helpful in advancing the case.

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